



---

## 4. MANAGEMENT, ORGANIZATION, AND INTERFACES

### 4.1 Organizational Structure, Responsibilities, and Interfaces

The following paragraphs discuss the organizational structure, responsibilities, and interfaces associated with the project.

The key organizations required to complete this SOW include DOE and Bechtel BWXT Idaho, LLC (BBWI). In addition to these organizations, a key interface exists with British Nuclear Fuels, PLC (BNFL) because waste zone material removed during the excavation portion of the project will be sent to the Advanced Mixed Waste Treatment Facility (AMWTF).

#### Organizational Structure

- Encompasses DOE and BBWI
- Incorporates key interfaces with various BBWI organizations, BNFL, regulatory agencies, and stakeholders

#### 4.1.1 DOE

The basic framework for roles and responsibilities for program and project management at the various operating levels within the DOE-HQ for this project are consistent with DOE Order 413.3. Accordingly, line managers, extending from the Secretary of Energy to the Deputy Secretary and Under Secretary, the Program Secretarial Officer, and the HQ Program Manager will be held responsible and accountable for successfully developing, executing, and managing the project within the baseline (cost, schedule, and scope).

The Idaho Operations Office Manager, the Federal Project Manager (FPM), and the contractor project manager will be held responsible and accountable for successfully developing, executing, and managing the project within the baseline (cost, schedule, and scope).

**Idaho Operations Office Manager.** Reporting directly to the Program Secretarial Officer (PSO), the Idaho Operations Office Manager has line accountability for contract management of all site program/project execution. The Idaho Operations Office Manager serves as the Acquisition Executive (AE) for the Glovebox Excavator Method Project.

**Federal Project Manager (FPM).** The roles and responsibilities of the FPM are as follows:

- Responsible and accountable for project management activities of the project
- Responsible and accountable for planning, implementing, and completing the project using a systems approach
- Main point of contact with DOE regarding project issues
- Contracting officer's technical representative (COTR) for this contract
- Acceptance and approval of deliverables.

**DOE-ID Assistant Manager for Environmental Management.** The assistant manager for environmental management (AM EM) is assigned responsibility for the execution and planning of the EM

---

projects at the INEEL with principal focus on cleanup and remediation of the environmental and waste zone material legacy from cold-war production operations and new waste zone material originating from cleanup operations. This responsibility includes:

- Ensuring that all programs and projects are executed in a way that is cost-effective while also protecting worker and public health and safety and the environment
- Ensuring that all work is performed in compliance with applicable federal, state, and local laws and regulations including the deadlines of the Settlement Agreement between the DOE, EPA, and the State of Idaho
- Maintaining appropriate relations with state and Federal government agencies, including HQ EM programs, private and scientific organizations, and stakeholder organizations.

**Director, Environmental Restoration Division.** The director for Environmental Restoration Programs is responsible for:

- Managing the Environmental Restoration Program, including technical oversight, budgetary control, and regulatory agency interface
- Reducing risks posed to INEEL workers, the public, and the environment by releases of hazardous and radioactive materials to soil and groundwater
- Determining risk and selecting remediation approaches, as defined by CERCLA, as agreed on in the FFA/CO for the INEEL
- Coordinating any Hazardous Waste Management Area corrective action or CERCLA response action to the release of hazardous or radioactive materials to soil and groundwater.

**Assistant Manager for Technical Support.** The assistant manager for technical support is responsible for providing program support in the areas of environmental compliance and permitting and environmental monitoring. The project will utilize subject matter experts from this organization in support of review and approval of the Nonnuclear Environment Safety and Health (ES&H) Plan and to regulate the contractor's performance of the nonnuclear safety work scope. Resources from the Quality Assurance and Security Division will also be required to assist the FPM.

#### **4.1.2 BBWI Organizational Structure**

The project execution contractor for the project is BBWI. Management of the project is the responsibility of the project manager, who reports to the WAG 7 manager of projects. The organizational structure of the project is shown in the simplified chart in Figure 4-1. The management, organization, and institutional safety structures employed to ensure safe operation of the project will be described in an interface agreement between RWMC and the project, as well as an interface agreement between AMWTF and the project.

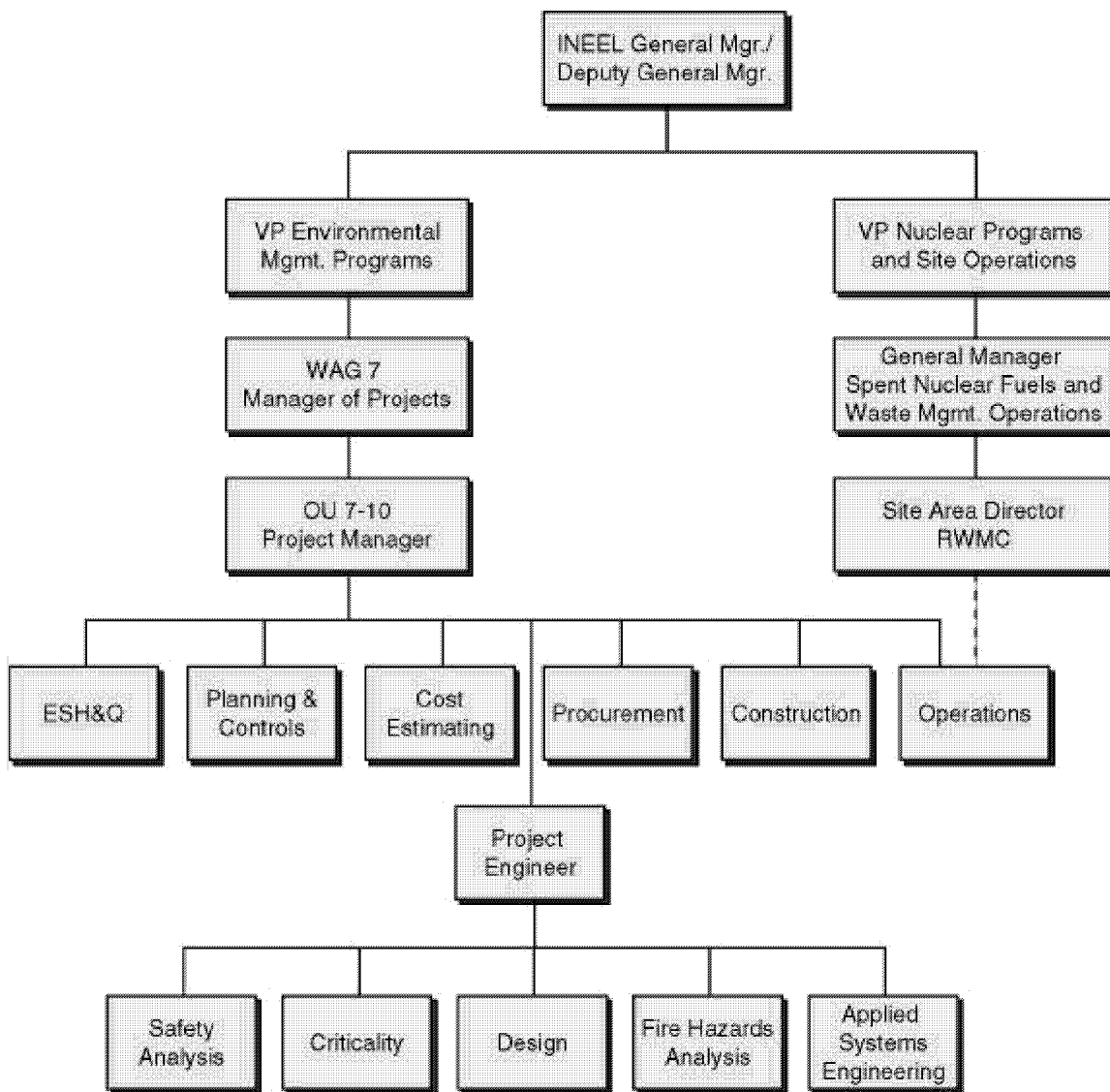


Figure 4-1. Project organization chart.

#### 4.1.3 BBWI Organizational Responsibilities

This subsection describes the DOE and INEEL organizations and responsibilities for managing project activities. Responsibilities include significant project interfaces, lines of authority, responsibilities, accountabilities, and communication.

Bechtel BWXT Idaho, LLC is responsible for the environmental remediation program at the INEEL. The Environmental Restoration Directorate executes this responsibility. The project manager reports directly to the WAG 7 manager. The RD/RA and overall project management for the project is led by BBWI with support from subcontractors on an as-needed basis.

---

**Vice President of Environmental Management Programs.** The Vice President of Environmental Management Programs is responsible for the following:

- Provides senior management sponsorship for the project at the EM level
- Maintains strategic relationship with DOE-ID Office of Environmental Management.

**WAG 7 Manager of Projects.** The responsibility of the WAG 7 manager of projects is to provide ER sponsorship to ensure that the project is planned, implemented, and reported under the WAG 7 Project Baseline Summary.

**Radioactive Waste Management Complex Site Area Director.** The RWMC site area director reports to the General Manager, Spent Nuclear Fuels and Waste Management Operations for operational issues, but is directly responsible for ensuring that all work at the RWMC is performed in compliance with the Site-wide conduct of operations and conduct of maintenance, and that the principles of the Integrated Safety Management System are applied to all work planning, control, and execution. These responsibilities include:

- Ensuring that all members of the RWMC workforce (including subcontractors) conducting work at the RWMC are properly trained
- Developing and executing the plan of the day
- Precluding any work from being performed that is not appropriately planned
- Providing startup authority for Glovebox Excavator Method Project.

**OU 7-10 Glovebox Excavation Method Project Manager.** The project manager for the project has overall responsibility for project execution, budgets and schedule, and to the customer and management's performance expectations. These responsibilities include:

- Managing, coordinating, and administering the project from the conceptual stages through planning, engineering, procurement, construction, start-up, and project closeout
- Using knowledge of engineering, procurement, and industry processes (e.g., construction, operations, R&D, and business systems) throughout the project to ensure project scope is accomplished, schedules are met, and work is completed within budget
- Supporting meetings and presentations to customers
- Managing the development of budgets and schedules, monitoring progress, and initiating action to ensure project objectives and schedules are met and work is performed within budget
- Executing scope within cost and schedule
- Resolving problems and coordinating the final turnover of the project to operations
- Providing leadership for the development and maintenance of a high performance project team

- 
- Promoting an open and informal communication environment, developing mutual trust and teamwork, and facilitating employee self-development
  - Establishing and maintaining strong and effective customer relations
  - Assisting in the training of new project managers and team members through both formal training and on-the-job training
  - Anticipating change and adjusting promptly and effectively
  - Taking the lead in working with all departments including engineering, planning and controls, procurement, construction, and other services as required for the project

**Project Engineer.** The project engineer is responsible to the project manager for providing day-to-day representation for the management and coordination of the engineering activities for the project. Specific responsibilities include:

- Providing design management
- Developing design schedules and budgets
- Designing to cost
- Identifying design issues and proposing resolutions to project management
- Ensuring that engineering and design conform to applicable codes and standards
- Coordinating design engineering, safety analysis, criticality, fire hazards analysis, and applied systems engineering
- Providing status on work accomplished in support of the reporting process.

**Project Procurement Supervisor.** The project procurement supervisor is responsible to the project manager for providing day-to-day representation for the management and coordination of the procurement activities for the project. Specific responsibilities include:

- Directing the project procurement function, including procurement contract formation, vendor document submittal, supplier quality (inspection), and receipt inspection
- Monitoring major procurement control documents
- Establishing controls for periodic review and evaluation of supplier and subcontractor performance
- Coordinating with principal project interfaces: engineering, construction, and operations
- Verifying compliance with contract requirements.

---

**Construction Manager.** The construction manager is responsible to the project manager for the overall coordination and management of construction activities for the project. Specific responsibilities include:

- Coordinating constructability reviews of the design documents
- Developing and implementing construction schedules including integration of long-lead procurement
- Working within established budgets and schedule, processing change controls as needed, and providing progress support and input to the project cost and schedule tracking tools
- Managing construction subcontractors day-to-day
- Ensuring that the necessary quality inspections take place in accordance with applicable procedures, and that quality issues are resolved
- Maintaining a safe workplace in compliance with BBWI procedures and requirements
- Supporting construction component testing and turnover to operations; supporting startup test as requested.

**Construction Coordinator (CC) Roles and Responsibilities.** The CC is responsible for providing key information and decisions during project planning and design concerning constructability issues and overall construction management and contracting strategies. The construction coordinator has primary responsibility for managing the construction phase from design completion to construction closeout. Other responsibilities include:

- Managing progress on work packages for cost, schedule, and technical performance for the construction phase of the project
- Serving as point of contact for all safety issues
- Resolving claims and negotiating change orders (with appropriate input from the project manager, design team leader, purchasing, and the inspectors)
- Reviewing and monitoring the construction contractor schedule and overall performance, and enforcing applicable contract requirements
- Coordinating dispute resolution between the contractor and BBWI.

**Construction Field Engineer (FE) Roles and Responsibilities.** The construction FE is responsible for providing information to and assisting the construction coordinator during project planning and design with respect to the constructability issues and overall construction management and contracting strategies. The construction FE has primary responsibility for working with the engineering design group during the construction phase from design completion to construction closeout. Other responsibilities include:

- Providing input and feedback to the project team on current construction trends
- Managing contractor construction changes

- 
- Resolving technical problems with input from the design team leader
  - Requesting design support to resolve design discrepancies
  - Providing quality inspection plan for Safety Class IV construction
  - Ensuring that Safety Class IV quality inspections are completed
  - Interpreting drawings and specifications
  - Requiring an as-built set of construction drawings to be maintained on site per contract requirements.

***Subcontract Technical Representative (STR) Roles and Responsibilities.*** The STR coordinates the activities of the inspection team on behalf of the construction management organization. Specific responsibilities include:

- Reviewing and approving contractor invoices
- Resolving claims and negotiating change orders (with appropriate input from the project manager, construction coordinator, design team leader, purchasing, and the inspectors)
- Enforcing terms and conditions of contracts
- Enforcing and coordinating ES&H requirements and activities, and overseeing compliance with DOE Order 5480.9a, “Construction Safety and Health Program”
- Managing emergency and accident response and coordination
- Conducting ES&H inspections
- Performing contract close-out
- Coordinating and administering contract warranty issues
- Participating in quality assurance reviews during design for constructability issues.

***Operations Manager.*** The operations manager is responsible to the project manager for all operational activities up to and including completion of the operational readiness review. During all phases of construction, testing, and operations, the operations manager is responsible for establishing and implementing company standards for executing work in a safe, proper, and efficient manner. The operations manager will routinely communicate with management in all areas of the company to identify barriers to successful application of work execution standards and ensure corrective actions to remove these barriers. In addition, the operations manager is also accountable to the RWMC site area director for the following responsibilities:

- Developing and implementing operating and maintenance procedures
- Developing and implementing training and qualification programs for the staff

- 
- Developing and executing component and integrated test programs for the retrieval facility and included equipment
  - Performing project mission and operations, including maintenance
  - Completing CERCLA documentation
  - Completing facility turnover to DD&D.

**Planning and Controls Lead.** The planning and controls lead is responsible to the project manager for providing planning and controls support. Specific responsibilities include:

- Developing project plans and budgets
- Tracking actual costs for the various control accounts and work packages
- Developing monthly reports, variance analysis, and variance corrective action plans
- Converting planning data into the environmental restoration baseline for cost and schedule
- Supporting the baseline change control process
- Supporting the trend program
- Developing weekly status summaries for cost and schedule performance for engineering, procurement, and construction.

**Environmental Lead.** The environmental lead reports directly to the project manager. Responsibilities include providing overall technical expertise with respect to regulatory issues, natural and cultural resources, and risk assessment for the OU 7-10 project. Specific duties and responsibilities include, but are not limited to, the following:

- Identifying environmental and regulatory issues that affect operations and developing solutions in coordination with the project engineer and project task leads
- Defining implementation details of the project environmental requirements through development of an environmental checklist (as needed) and project ARARs implementation documentation
- Reviewing the quality of project deliverables from an environmental regulatory standpoint
- Supporting project task leads by reviewing plans, procedures, and technical documents to ensure that all regulatory issues and requirements have been addressed
- Working with the project's task leads and management to develop appropriate mitigation measures when environmental issues are identified minimizing the potential for noncompliance with environmental requirements
- Assisting the project engineer and project task leads by providing regulatory and compliance oversight, direction, and acceptance of subcontracted environmental work



- 
- Coordinating project status and environmental issues with environmental affairs home organization points of contact to ensure consensus and to obtain specific environmental discipline support as needed.

**Rad-Con Management.** The facility Rad-Con manager interfaces with the project manager. His/her specific duties and responsibilities include, but are not limited to, the following:

- Ensuring that radiological hazards are identified and appropriate controls are implemented to maintain worker exposure to those hazards as low as reasonably achievable (ALARA)
- Interfacing with the project health and safety representative
- Providing information regarding radiological resources for project planning
- Providing a management team for Rad-Con personnel.

**Radiological Controls Engineer.** The radiological controls engineer reports directly to the facility Rad-Con manager and to the project manager. He/she is responsible for providing radiological engineering support within the project. His/her specific duties and responsibilities include, but are not limited to, the following:

- Conducting ALARA reviews, exposure and release modeling, and shielding and radiological controls optimization for all work planning
- Serving as the project point of contact for design and operations issues related to ALARA and Rad-Con
- Ensuring that radiological hazards are identified and appropriate controls are implemented to maintain worker exposure to those hazards ALARA
- Interfacing with the project health and safety representative.

**Radiological Control Technicians.** The radiological control technicians report directly to the facility Rad-Con management (foreman or lead). They are responsible for ensuring compliance with the INEEL Radiological Control Program (Company Manual 15A) within the project. Their specific duties and responsibilities include, but are not limited to, the following:

- Completing all tasks assigned by the radiological management
- Assisting project personnel in complying with the INEEL Radiological Control Program, and project- or facility-specific radiological controls
- Acting as a radiological control information resource for field personnel
- Complying with procedures, instructions, and work permits for tasks assigned
- Immediately reporting any procedural conflicts, unplanned circumstances affecting the performance of assigned tasks, unsafe conditions, alarming equipment, or abnormal job site or work conditions to the radiological controls supervisor and project task lead

- 
- Taking corrective action during emergencies, stopping work, or ordering an area evacuated when an imminent radiation hazard exists and such actions are necessary to ensure worker safety.

**Safety And Health Representative.** The duties of the safety and health representative include the following:

- Preparing site safety plans, hazards identification analysis, confined space permits, fall protection work plans, exposure assessments ergonomic evaluations, and other safety documents as required by federal regulation or company procedure
- Assisting project personnel in complying with applicable health and safety standards and related INEEL procedures
- Scheduling personnel exposure monitoring, as needed, providing direction to the industrial hygiene technician, and interpreting monitoring results
- Determining appropriate personal protective equipment needs for project personnel, visitors, and subcontractors
- Reviewing work packages for completeness of safety and health content, hazard identification, and appropriate mitigation efforts
- Interfacing with the radiological controls and quality engineer
- Supporting project management in investigating accidents and injuries and preparing written reports to project and functional management
- Acting as a source of health and safety information for project personnel and addressing related employee concerns
- Interfacing regularly with the project task leads on all project activities having health and safety implications
- Ensuring safety and health training is current
- Ensuring that project management is continually updated on the condition of all projects from a safety and health perspective
- Conducting on-site safety assessments
- Conducting safety and health assessments to verify implementation and compliance to applicable health and safety standards and related INEEL procedures.

#### **4.1.4 Primary Project Interfaces**

Successful accomplishment of the project will be dictated by the timely communication and effective cooperation of many parties. Some of these exist within the BBWI organization and are driven by the same influences as the project organization. However, some are external to BBWI and the INEEL.

---

The project manager must effectively orchestrate the interfacing relationships of these interested or affected groups, which are highlighted in the following subsections.

**BNFL Interface.** The *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications* contains critical project assumptions to support the planned disposition of Pit 9 transuranic-contaminated waste zone material at the AMWTP:

“Assume that the planned sampling and characterization/data strategy is adequate and is limited to only that required for safe storage of retrieved waste and current AMWTP waste acceptance criteria. Assume that processing of the retrieved waste at the AMWTP will be successfully negotiated with the operating contractor.”

BBWI plans to prepare and implement an interface agreement with BNFL (via DOE-ID) for AMWTP acceptance of the waste zone material excavated during performance of the project. The principal elements of this interface agreement will include the following:

- Waste zone material description
- AMWTP waste zone material acceptance criteria
- Waste zone material packaging strategy
- Characterization strategy
- Transportation, receipt, and storage of waste zone material.

**BBWI Interfaces.** The project requires support from various organizations within BBWI, especially RWMC and Waste Generator Services. The project managers obtain this support through task baseline agreements and interface agreements.

**Regulatory Interfaces.** The BBWI project manager defines the strategic approach, directs overall activities, and measures progress toward accomplishing project objectives. Day-to-day actions to achieve this end are accomplished through coordination and management by the project manager. The DOE Federal Project Manager maintains contact with state and federal regulatory agencies and communicates with the BBWI project manager to ensure that all project work is carried out in accordance with applicable laws and agreements. The following are necessary interfaces with the regulatory agencies:

- **Idaho Department of Health and Welfare and Environmental Quality**—The Idaho Department of Health and Welfare and Environmental Quality provides critical stakeholder input to refine both near-term and long-term approaches to remediation projects as well as to provide final interpretation of state rules and regulations. Therefore, effective interface is necessary with this agency to realize successful project completion.
- **U.S. Environmental Protection Agency (EPA)**—The EPA also provides critical stakeholder input to refine both near-term and long-term approaches to remediation projects as well as to provide final interpretation of federal rules and regulations. Therefore, effective interface is required with this agency to realize successful project completion.

- 
- **U.S. Department of Energy**—The DOE provides overall project funding and programmatic direction relative to specific DOE rules and regulations. The DOE Federal Project Manager has the ultimate authority to direct and change project technical, cost, and schedule baselines as it deems appropriate. The project manager must continually comply with these directions or changes; therefore, the project manager must maintain close and constant interface with the DOE to ensure realization of project baselines.

The Federal Project Manager, through a working group that involves all parties, manages these interfaces. Telecommunications and meetings are routinely conducted. Through these discussions, regulatory interpretations are negotiated and managed. For inconclusive or conflicting opinions, a proactive approach is developed by the Federal Project Manager and documented to establish regulatory decisions so that the project can progress on track.

**Stakeholder Interfaces.** Stakeholders can influence actions associated with the project. Examples of these stakeholders are:

- INEEL Citizens Advisory Board
- Indian Tribes
- Environmental groups
- Citizens of the State of Idaho.

Both direct and general public interfaces with these groups are vital to the success of the project. These interfaces are outlined and carried out in accordance with the INEEL Community Relations Plan. The vehicle for communicating project changes to these stakeholders is through the explanation of significant differences to the ROD and other associated documents.

## 4.2 References

MCP references are generic in nature in CD-1. In the execution phase we will only call out MCPs and MCP sections that are applicable to the project.

42 USC 4321-4347, “National Environmental Policy Act.”

DOE O 413.3, 2000, “Program and Project Management for the Acquisition of Capital Assets.”

DOE-ID, 1995, *Community Relations Plan-A Guide to Public Involvement in the Environmental Restoration Program at the INEEL*, DOE/ID-10778.

INEEL, 2001, *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications*, INEEL/EXT-01-01105.

## 5. RESOURCE REQUIREMENTS

### 5.1 Staffing

Overall project staffing needs will be developed from the detailed work planning (DWP) process. Figure 5-1 shows the overall relationship between Work Breakdown Structure (WBS) development, scheduling, work costing, and resource need development.

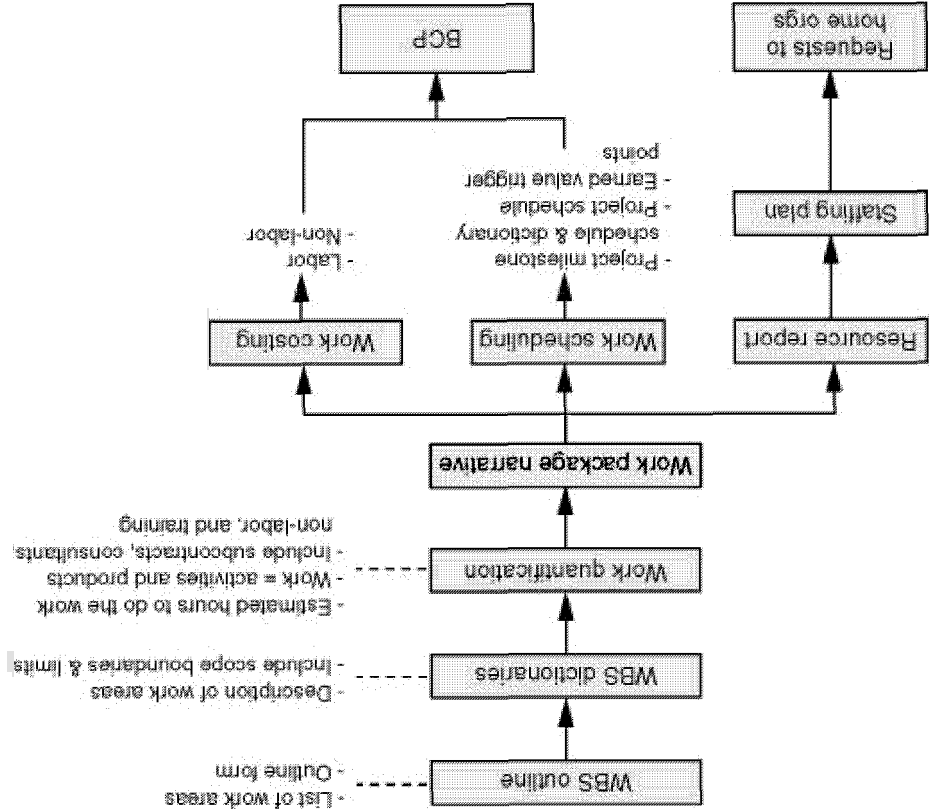


Figure 5-1. Work planning process.

Once the work scope is defined and quantified, it is scheduled and costed. In parallel, a resource report is developed, showing how resource needs by corporate work discipline code (WDC) distribute over time. This, in turn, is used to develop the project staffing plan, which is used to communicate the project's needs to the resource-providing home organizations and thus secure the necessary resources to perform project work.

As discussed in Section 1.3, Acquisition Strategy and Processes, BWI has the resources needed to perform this work, with specialty assistance as noted in that section.

- Developed based on the DWP and cost baseline
  - Includes staffing, funding, equipment, and support services
- Resource Requirements**

---

## **5.2 Funding**

Section 6.3, Cost Baseline, provides the project cost baseline. Total project costs, with distribution over FY 02, FY 03, and FY 04, are detailed in that section and Appendix E. Funding amounts identified in the Cost Baseline are needed to complete the project on schedule.

## **5.3 Equipment**

No special equipment has been identified at this time to support the project efforts.

## **5.4 Support Services**

Support services for the project will be provided from existing BBWI resources, and are included in the project staffing plan.

All necessary laboratory analysis support is available from existing BBWI resources; however, offsite laboratories will be considered as appropriate.



## 6. PROJECT BASELINES AND PLANNING AND CONTROLS

### 6.1 Technical Baseline

This section summarizes the technical requirements and identifies major project deliverables. The technical baseline consists of the project scope, the technical and functional requirements (T&FRs), the Work Breakdown Structure (WBS), and the planned project deliverables.

#### 6.1.1 Scope Summary and Basis

The objectives of the project are defined in *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications*. The objectives are to:

- Demonstrate waste zone material retrieval
- Provide information on contaminants of concern present in the underburden
- Characterize waste zone material for safe and compliant storage
- Package waste zone material in containers acceptable at the Advanced Mixed Waste Treatment Facility (AMWTF).

The project scope includes the design, procurement, construction, testing, readiness reviews, acceptance for delivery, and operations of facilities for retrieving, packaging, and storing waste zone material from the selected area of Pit 9.

The project facilities are located in the selected area of Pit 9 and includes a retrieval system, packaging glovebox system, and storage system. The retrieval system consists of a weather enclosure structure, a confinement structure, an excavator, a ventilation system, and other supporting equipment.

The packaging glovebox system consists of three gloveboxes in which operators examine materials, take samples, and package waste zone material. The storage system includes an interim storage area for packaged materials without PCB contamination and cargo containers for PCB-contaminated packaged waste zone materials.

The T&FR document establishes the technical baseline for the project and contains project requirements. It contains requirements for the design, operations, and DD&D of the demonstration retrieval facility. Those requirements are based on the project objectives.

The T&FR document contains project requirements, but it does not contain detailed design criteria. The system design criteria documents contain detailed design criteria.

#### **The Glovebox Excavator Method Project:**

- Has a detailed technical baseline, which includes project scope and technical and functional requirements
- Develops and maintains a detailed schedule
- Has a baseline cost estimate and work breakdown structure
- Controls changes to the baseline
- Follows an effective work authorization process
- Processes and controls communications

---

The project team produced the T&FR document in accordance with MCP-9185, “Technical and Functional Requirements.” The T&FR document identifies, documents, and controls the technical and functional requirements, including the technical basis and associated performance requirements to execute the design process. The project engineer is responsible for the T&FR document content and approval. The project team updates the T&FR document as needed, according to applicable project procedures.

## **6.1.2 Work Breakdown Structure**

Appendix B provides the WBS for the project represented to the third level of detail. The WBS will be used after CD-1 authorization and includes the following work packages at the first WBS level:

1. Environmental, Safety & Health, and Quality
2. Design Engineering
3. Procurement
4. Construction
5. Safe Shutdown, Decontamination, and Decommissioning
6. Start-up and Testing
7. Operations
8. Maintenance
9. Project Management and Administration

The following paragraphs describe the WBS and how it will be used on the project. The WBS and associated documents:

- Represent the project
- Define the work to be accomplished
- Define how the work is to be performed.

The objective of the WBS is to subdivide the total project into manageable units of work for effective planning and control. In the WBS, work is subdivided into successive lower levels of detail. Each successive level consists of elements that identify the different areas and functional requirements of the project. Each lower level is a meaningful subdivision of a higher element.

All project team members contributed to develop the WBS. They identified the correct layout and breakdown of the project into several levels of detail. Levels of management responsibility are assigned to work package managers (WPM) and are defined in the responsibility assignment matrix (RAM) (see Figure 6-1). The project WBS:

- Details the work



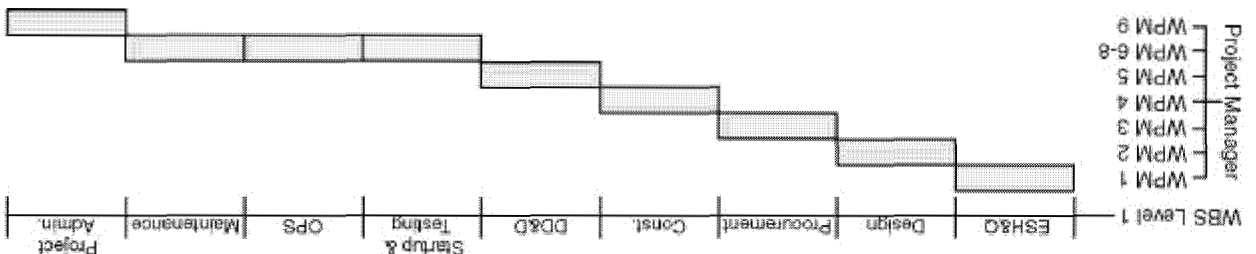
- Remedial Design Work Plan
  - Design Review Package
  - Remedial Action Work Plan
  - Operations and Maintenance Plan
  - Pre-Final Inspection Checklist
  - 100% Design Package
- The project team deliverables meet extensive documentation requirements as specified by CERCLA, a primary driver for Environmental Restoration projects. A project Document Deliverables list (Appendix C) has been developed utilizing the Engineering Design File (EDF-151) developed in the original Stage II RD/RA Work Plan. Listed documents are prepared and controlled according to requirements set forth in the project Configuration Management Plan and Records Management Plan. Project document deliverable topical areas are:

### 6.1.3 Document Deliverable List

- Cost estimates
  - Cost control budgets
  - Trends
  - Project cost forecasts
  - Project schedules
  - Corresponding management reports developed from this data.
- The WBS links cost and schedule information for the project and facilitates efficient electronic migration of data between the following:

- Simplifies the summarization of data
- Reflects and establishes the management and reporting relationships within the project.

Figure 6-1. Responsibility assignment matrix.



- **Pre-Final Inspection and Operational Readiness Report**
- Remedial Action Report
- Operations and Maintenance Report.

## 6.2 Scheduling

The project team develops and maintains a detailed schedule. They develop and maintain the schedule according to the following documents:

- “Detailed Work Plan System Guidance”
- “Detailed Work Plan Process Guidance”
- “Planning and Controls Desktop Reference.”

Figure 6-2 illustrates the process the team follows to develop and implement the project schedule. The following subsections describe the process. Figure 5-1 shows the overall relationship between WBS development, scheduling, work costing, and resource need development.

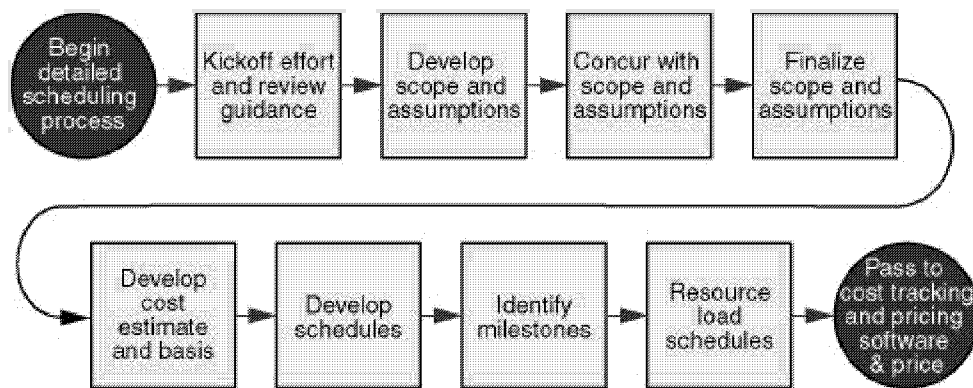


Figure 6-2. Scheduling process.

### 6.2.1 Detailed Scheduling Process

1. First, all project team members discuss the basic scope and assumptions before developing detailed schedules and cost estimates. The project manager holds discussions with team members to define scope and preliminary budget targets. The project manager is responsible for organizing the project team and establishing each member's role and responsibility.
2. DOE-ID or the sponsor provides general scope and funding targets through the Project Execution Guidance or other formal document. For Environmental Management projects such as the project, funding targets are based on the President's budget and the "EM Program Integrated Priority List."
3. Then, the project team reviews and understands the "Detailed Work Plan Process Guidance" provided to them. They develop a plan to achieve the project key deliverables. They must understand the company charging practices.

- 
4. Next, the project team documents preliminary scoping statements in a work package form. These scoping statements and assumptions are the starting point for producing detailed schedules and cost estimates.
  5. Next, the project team members concur on the fiscal year scope and assumptions. They use the scope and assumptions later to produce detailed plans.
  6. Then, the project team develops detailed scope to ensure requirements and assumptions are clearly identified and quantified. They develop and retain backup documentation supporting the detailed assumptions, cost estimates, prerequisites, and resource requirements.
  7. Next, the project team develops the cost estimate and basis from the previously identified scope and assumptions.

### **6.2.2 Develop Schedules**

Then, the project team develops the schedule to execute the work scope. The project team is responsible for defining the activities and schedule logic to complete the work scope. They use the corporate scheduling software to complete the initial time phasing for this scope of work and the latest approved shells covered in the “Detailed Work Plan Systems Guidance.” This assists them in determining compliance milestones, key interface dates, and deliverable due dates throughout the fiscal year. The planning and controls engineer also uses the “Detailed Work Plan Process Guidance” and the “Planning and Controls Desktop Reference” during the scheduling process.

Developing the schedule is an iterative process. The project team uses early versions of the schedule to identify assumptions, prerequisites, and schedule conflicts. The final schedule is detailed enough to track progress monthly.

### **6.2.3 Identify Milestones**

The project team includes the following milestones in the schedule:

- DOE-directed milestones
- Critical Decisions (CDs)
- Internal intermediate milestones.

They use these milestones to identify key milestones and complete critical activities. These milestones are included as individual line items within the schedule.

### **6.2.4 Resource Load Schedules and Pass to Cost and Pricing Tool**

Next, the project team identifies resources by activity required to accomplish the defined work scope. The planning and controls engineer assigns resource data based on the project team input to the scheduling software to schedule activities and generate reports. Finally, the planning and controls engineer loads schedule data from scheduling software into the cost tracking and pricing tool according to the “Detailed Work Plan Systems Guidance.” The planning and controls engineer generates various cost and resource reports from the pricing software for the project team to review. Project teams use these reports to analyze resource availability and budget.

---

### 6.2.5 Project Schedule

Appendix G provides the project summary schedule. The Glovebox Excavator Method Project consists of three primary phases:

- Site development—covers design, bid and award, and construction activities relative to site access improvements, earthwork/pad, electrical service, and firewater installation.
- Structures—covers design, procurement, bid and award, and construction of the Retrieval Confinement Structure (RCS), Facility Floor Structure (FFS), and the Weather Enclosure Structure (WES).
- Facility completion—covers final design, bid and award, and construction of the ventilation system, electrical distribution, facility fire protection, and instrumentation and controls; and installation of the gloveboxes and excavator.

The master schedule for the project has been prepared based on the above strategy, with consideration given to fiscal-funding limitations, weather, and the construction season (time of year). The following preliminary project milestones are based on BBWI's understanding of dispute resolution agreements from DOE:

CD-1 Authorization	February 28, 2002
Remedial Design Submittal to DOE	October 31, 2002
CD-2/3 Authorization	August 30, 2002
Notification of Commencement of Construction	November 30, 2002
CD-4 Authorization	February 28, 2004
Notice of Commencement of Excavation	March 30, 2004
Notification of Completion of Excavation	October 31, 2004

The schedule for notifying the Agencies of obtaining CD-2/3 per the referenced November 26, 2001 letter is August 30, 2002. However, in order to meet the project objective of having the facilities enclosed from the weather by November 2002, CDs must be obtained in phases. Partial CD-3a, which will occur once the site development design is completed (anticipated in April of 2002), constitutes DOE-ID's approval to initiate construction of the same. Partial CD-3b, which is expected to occur in May of 2002, will approve procurement of the WES and construction of the FFS. CD-2/3, which is expected to occur by August 2002, will authorize the remainder of construction activities, it being the final critical decision for designing the project.

## 6.3 Cost Baseline

### 6.3.1 Total Project Cost

During conceptual design, the project team developed a preliminary baseline cost estimate range. Based on the project WBS each level was estimated to arrive at a total project cost. The project team used (a) an estimating program to develop and format the estimate to a level of detail consistent with the

---

preliminary baseline information; (b) a combination of several estimating techniques, as outlined in the *INEEL Cost Estimating Guide* (DOE/ID-10473), to meet the estimating requirements of DOE Order 413.3, “Program and Project Management for the Acquisition of Capital Assets”; and (c) published construction estimating databases, vendors and material suppliers, subject matter experts, and Site-specific historical information to determine pricing and productivity rates for estimate detail items. In addition, the validity of the estimated costs for project management, Site support, project design, procurement, construction management, construction, and start up and testing was evaluated during department and project team reviews of the estimate. Attached to the estimate is a recapitulation of the estimating scope, basis, assumptions, and contingency analysis methodology used in creating the estimate. Cost estimating assumptions are presented in Appendix A. Also, cost escalation factors to the estimate levels were applied according to the *INEEL Cost Estimating Guide*, consistent with the baseline project schedule. The project baseline cost estimate range for CD is \$78–82 million.

During conceptual design, the project team developed a preliminary baseline cost estimate range. Based on the project WBS, each level was estimated to arrive at a total project cost (TPC). The project team uses an estimating program to develop and format the estimate to a level of detail consistent with the preliminary baseline information. Using a combination of several estimating techniques, as outlined in DOE/ID-10473, “INEEL Cost Estimating Guide,” to meet the estimating requirements of DOE Order 413.3, “Program and Project Management for the Acquisition of Capital Assets.” Published construction estimating databases, vendors and material suppliers, subject matter experts, and Site-specific historical information were used to determine pricing and productivity rates for estimate detail items. In addition, the validity of the estimated costs for project management, Site support, project design, procurement, construction management, construction, and start up and testing during department and project team reviews of the estimate were addressed. Attached to the estimate is a recapitulation of the estimating scope, basis, assumptions, and contingency analysis methodology used in creating the estimate. Cost estimating assumptions are presented in Appendix A. Also, cost escalation factors to the estimate levels were applied according to the “INEEL Cost Estimating Guide,” consistent with the baseline project schedule. Project baseline cost estimate range for CD is \$78–82 million. Appendix D summarizes the preliminary baseline cost estimate at the first WBS level. The cost estimate is presented in Appendix D.

### **6.3.2 Funding Profiles**

Project funding profiles are provided in Appendix E.

### **6.3.3 Cost Contingency**

Contingency was included in the cost estimating process to cover cost/schedule risks. Potential risks to the project were identified and evaluated for activities at the second or third level of the WBS. Through a consensus process, an upper and lower bound was determined as a percent change from the original estimated cost. This data was input into the commercial software package to calculate and apply the appropriate contingency to the estimate elements using a Monte Carlo simulation technique and triangular distribution. The overall project risk assessment and management process described in Section 9 is included for input and consideration in the project contingency analysis. Appendix D shows the resulting cost contingency.

## **6.4 Baseline Change Control**

The project team effectively controls changes to the baseline. They follow the applicable MCPs and other appropriate guidance to control changes. Specifically, they follow:

- 
- MCP-3805, “Trend Identification, Monitoring, and Analysis.” Trends provide an early warning control tool that precedes formal changes.
  - MCP-3416, “Baseline Change Control.”
  - MCP-3794, “Baseline Management.”
  - “Planning and Controls Desktop Reference,” Section 9.

To develop supporting documentation, the project team focuses on scope definition and pertinent assumptions. The project balances between scope definition that is too fine to allow flexibility in the work and definition that is too broad to control the scope and prevent scope creep. Project management and planning and controls maintain this balance by ensuring that the appropriate scope definition is included in each BCP.

The BCP strategy for the project is to focus on the current fiscal year. Therefore, outyear scope, schedule, and cost information are presented at a summary level in a planning package.

The project team coordinates baseline changes with site area directors and functional managers to ensure necessary resources are available to perform the scope.

## **6.5 Work Authorization**

The project team has an effective work authorization process. They follow MCP-22, “Work Authorization.” They only perform work authorized in an approved Detailed Work Plan or Baseline Change Proposal.

In addition, the project team controls charge numbers to ensure authorized performers perform authorized work. To further ensure accurate charging practices, the individual performers receive instructions when they receive charge numbers.

## **6.6 Performance Monitoring**

### **6.6.1 Schedule Performance**

The project measures schedule performance on actual physical work accomplishments. It measures noncontract performance on percent complete as determined by the work package manager and project team with identifiable trigger points. Trigger points have an associated performance value. They may also be based on milestone completion, engineering standards, or equivalent units. True level-of-effort tasks are based on a calculation of productive hours for the period as identified in the appropriate fiscal year accounting calendar. The project team determines contract earned value as follows:

- By measured number of units in place
- By material on-site in bonded storage
- Upon receipt
- By surveillance by authorized BBWI representative

- 
- Upon performance payment as contracted by procurement.

### **6.6.2 Cost Performance**

The project effectively tracks cost performance. Planning and Controls prepares reports documenting cost actuals for project management. The report includes:

- Weekly actuals (dollars and hours)
- Month cumulative actuals (dollars and hours)
- Year-to-date actuals (dollars and hours)
- Authorized funding
- Various ad-hoc reports

### **6.6.3 Variance Analysis**

The project performs variance analysis monthly for year-to-date performance. This analysis includes the identification of cause, potential impacts, and corrective actions.

The project also analyzes resource usage variances to identify resource shortages and to determine if functional management must be notified of needs shortages or overages.

### **6.6.4 Estimates at Completion**

The project team develops monthly estimates at completion (EACs). They monitor identified trends and use them to develop the EACs. Planning and controls reports the EACs as early as practicable in the fiscal year.

### **6.6.5 Thresholds**

The project team identifies EM thresholds according to Appendix A of MCP-3822, “Performance Measurement, Analysis, Estimates at Completion, and Reporting.” They identify trend thresholds according to MCP-3805, “Trend Identification, Monitoring, and Analysis Program.”

### **6.6.6 Reporting**

The project team meets company and DOE-ID reporting requirements. They then roll it up into an Environmental Restoration monthly report, which is delivered to DOE-ID.

During monthly WAG 7 program reviews, the project team provides detailed project reports to:

- DOE-ID project management
- DOE-ID funds management
- WAG 7 management

- 
- Environmental Restoration management.

The reports include the following information:

- Significant accomplishments
- Cost performance (earned value)
- Schedule performance (earned value)
- EAC information
- Milestone, Program Execution Guide/Program Evaluation Management Plan, and project baseline summary (PBS) status
- Cost and schedule analyses, including discussion of variance causation, impacts, and corrective actions
- 30-60-90 day look ahead to significant activities
- Baseline change history
- Trend register and history
- Milestone schedule
- Issues identification and discussion
- Resource projections.

In addition, the project team invites DOE-ID project management, WAG 7 management, and ER management to project Plan of the Week meetings.

The project team responds to all DOE-ID and BBWI management requests for specific reporting information. During conceptual design, they reported to BBWI senior management and the acting DOE-ID general manager. These reports will continue throughout the remainder of the project.

## **6.7 Communications**

The project effectively processes and controls communications. They follow an established guide for formatting and preparing external and internal correspondence at the INEEL. They also track, retrieve and store project correspondence that affects the company's contract scope, cost, or schedule in compliance with the INEEL-wide correspondence control procedure. The following subsections describe how the project processes and controls the following:

- Outgoing external correspondence
- Incoming external correspondence
- Internal correspondence



- 
- Incoming and outgoing communications transmitted by fax and e-mail
  - Teleconferences and verbal communications
  - Special categories of communications.

### 6.7.1 Outgoing External Correspondence

The project has an effective correspondence control process, which ensures project correspondence is managed, processed, and stored according to requirements and procedures. GDE-9, “Office Correspondence Guidelines,” describes how project personnel format and prepare formal and external project correspondence. MCP-3816, “Correspondence Control,” covers the project’s correspondence control process, assigning the correspondence control responsibilities and duties of originators and management, the types of correspondence involved, and tracking actions and commitments from correspondence. Figure 6-3 illustrates the outgoing external correspondence process.

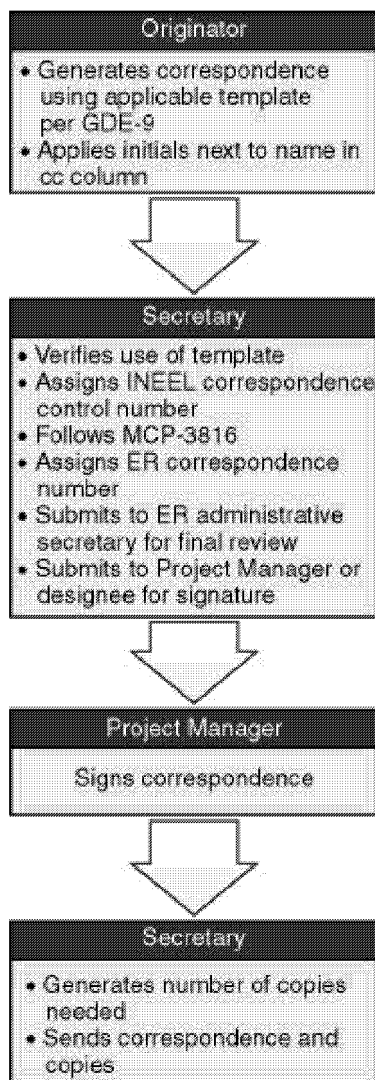


Figure 6-3. External correspondence process.

---

### **6.7.2 Incoming External Correspondence**

The project controls incoming external correspondence. The project secretary receives all incoming external correspondence. The secretary applies an INEEL correspondence control number and assigns or closes action according to MCP-3816. Then, the secretary distributes the incoming external correspondence as directed by the project manager.

### **6.7.3 Internal Correspondence**

The project controls internal correspondence (to and from other INEEL entities). Project personnel obtain a WAG 7-specific tracking number for internal correspondence from the project secretary. In addition, the project secretary assigns a WAG 7-specific tracking number from the WAG 7 letter log to all internal correspondence to and from the project manager.

### **6.7.4 Incoming and Outgoing Communications Transmitted by Fax and E-mail**

Project personnel control correspondence transmitted by fax and e-mail. They process correspondence transmitted by fax in the same manner as incoming and outgoing correspondence described in the previous subsections. The fax cover sheet and the correspondence are filed together in the project files. The project records management plan, PLN-598, describes how the project processes and stores records, of which correspondence is one record type.

When project personnel communicate project information by e-mail, they copy the Pit 9 e-mail server file. If they transmit external correspondence as an e-mail attachment, they formally process and distribute it following the process described in the previous subsections. The project records coordinator attaches the e-mail hard copy to the correspondence and maintains them in the project file. When record types other than communications are attached to e-mails, project personnel manage and control those records and documents according to PLN-598.

### **6.7.5 Verbal Communications**

Project personnel control verbal communications. They generate notes, similar in format to meeting minutes, to document verbal communications, including teleconferences, agreements, changes to work activity, and requests for responses to discussion points; and to record discussion points and assigned actions. They forward the notes to the project secretary for distribution as directed by the project manager.

### **6.7.6 Special Categories of Communications**

Project personnel notify the project secretary when they forward special categories of communications, and they process them according to MCP-3816.

## **6.8 References**

MCP references are generic in nature in CD-1. In the execution phase we will only call out MCPs and MCP sections that are applicable to the project.

42 USC § 9601, “Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund).”

DOE O 413.3, “Program and Project Management for the Acquisition of Capital Assets.”

---

DOE/ID, 2000, "Draft Operable Unit 7-10 (OU 7-10) Staged Interim Action Project, Stage II, RD/RA Work Plan Primary Deliverable Submittal," DOE/ID-10767.

DOE/ID, 2000, "INEEL Cost Estimating Guide," DOE/ID-10473.

EDF-ER-151, "Operable Unit 7-10 (OU 7-10) Staged Interim Action Project - Stage II, Document Hierarchy and Deliverables," INEEL/EXT-2000-00266.

GDE-9, "Office Correspondence Guidelines."

GDE-70, Section R, 2001, "Guide for General Project Management Methods," Section R, "Project Controls Strategy," Rev. 3, September 26, 2001.

INEEL, 2001, *Environmental Management FY 2002 Integrated Priority List*, Rev. C, Idaho National Engineering and Environmental Laboratory, Bechtel BWXT Idaho, LLC, Idaho Falls, Idaho, December 5, 2001.

INEEL, 2001, "FY 2002–2004 Detailed Work Plan (DWP) Development Process Guidance."

INEEL, 2001, "FY 2002-2004 Detailed Work Plan System Guidance."

INEEL, 2001, *Technical and Functional Requirements for the Operable Unit 7-10 Glovebox Excavator Method Project*, INEEL/EXT-1998-00444, TFR-2527.

INEEL, 2001, *Waste Area Group 7 Analysis of OU 7-10 Stage II Modifications*, INEEL/EXT-01-01105.

INEEL, 2001, "INEEL Cost Estimating Guide."

MCP-22, "Work Authorization."

MCP-2809, "Preparation, Handling, and Release of Technical Information Products."

MCP-3416, "Baseline Change Control."

MCP-3794, "Baseline Management."

MCP-3805, "Trend Identification, Monitoring, and Analysis Program"

MCP-3816, "Correspondence Control."

MCP-3822, "Performance Measurement, Analysis, Estimates at Completion, and Reporting."

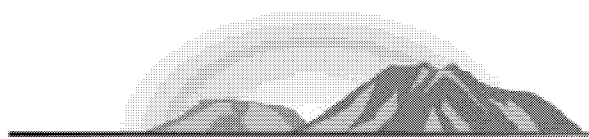
MCP-9106, "Management of INEEL Projects," Rev. 3, September 30, 2001.

MCP-9185, "Technical and Functional Requirements."

PLN-598, "Records Management Plan for the OU 7-10 Glovebox Excavator Method Project, (Draft)."

PLN-996, "Configuration Management Plan for the OU7-10 Glovebox Excavator Method Project."





## 7. DOCUMENT AND RECORDS MANAGEMENT

The Glovebox Excavator Method Project implements effective document and records management processes, which are specified in both the INEEL Document and Records Management program (refer to MCP-135 and MCP-557) and the project records management plan (PLN-598). As applicable, project records are also processed and managed in accordance with the FFA/CO. This ensures that project records are created as specified and managed to protect them from loss, damage, destruction, or unauthorized access and/or removal. Additionally, project records are created and managed as quality records, which requires that they be complete, legible, corrected in accordance with quality assurance requirements, validated, verified, and accessible.

### 7.1 Process

The project effectively processes records as specified in Company and project-specific documents:

The records coordinator processes all project records. This ensures that records are processed methodically and uniformly. The records coordinator also verifies that all records are complete before they are submitted to document control, Administrative Record and Information Repository (AR/IR) determination, and the Electronic Document Management/Optical Imaging System (EDM/OIS). In addition, the records coordinator verifies required retention periods and ensures records are available to support litigation. This is a requirement because of previous and ongoing litigation associated with the OU 7-10 disposal area.

#### Document and Records Management:

- Manages, processes, and stores Glovebox Excavator Method Project records according to requirements
- Provides resources, procedures, and personnel.

All project records are retained according to requirements. They are assigned retention periods as specified in the DOE Administrative and Environmental Records Schedules.

Figure 7-1 illustrates the project records management process.

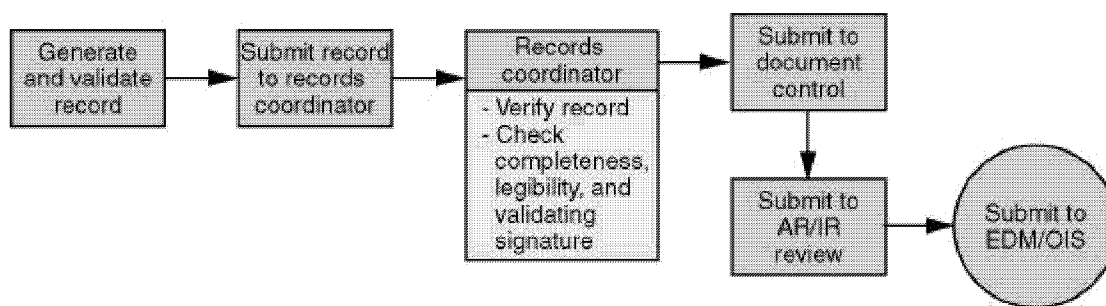


Figure 7-1. Records management process.

The Document Management Control System processes all revision-controlled documents. MCP-135, "Creating, Modifying, and Canceling Procedures and Other DMCS Controlled Documents," describes the document control process. This process provides a consistent approach to planning, developing, reviewing, changing, approving, and controlling project documents.

---

All project records are readily accessible. The project's record copies are stored electronically in the EDM/OIS. This system implements the requirements of the FFA/CO and MCP-557 and provides a long-term stewardship baseline. In addition, as a convenience to project personnel, a copy of project records/documents and reference materials are maintained in the project files during the life of the project for quick retrieval.

## **7.2 Records Management Resources**

Project personnel have several records management resources, including records management documents, records management and document control professionals, and a records management Web site. These resources ensure past records management concerns are addressed and resolved.

Project personnel and records personnel use the following reviewed and approved records management implementing documents, which are readily accessible on the Intranet.

- PLN-598, "Records Management Plan for the OU 7-10 Glovebox Excavator Method Project," provides detailed records management and document control responsibilities and processes.
- MCP-557, "Managing Records," describes how project personnel manage records.
- MCP-3573, "Vendor Data," describes how project personnel process vendor documents.
- LST-9, "Uniform Filing Codes," lists the Uniform File Codes project personnel apply to the project's record types.
- MCP-204, "Administrative Record and Information Repository Procedure for Environmental Restoration," describes how to determine Administrative Record and Information Repository and lists FFA/CO record types that must be accessible to the public.

Records management personnel (known as records coordinators) and document control professionals provide direct support to the project. Their responsibilities include the following:

- Verify, process and manage project records and controlled documents
- Provide records management guidance to project personnel
- Provide quantitative data on the processing of records and controlled documents
- Process and publish current approved documents.

## **7.3 References**

MCP references are generic in nature in CD-1. In the execution phase we will only call out MCPs and MCP sections that are applicable to the project.

DOE Administrative and Environmental Records Schedules.

---

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, U.S. Department of Energy, Idaho Field Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.

LST-9, "Uniform File Codes."

MCP-135, "Creating, Modifying, and Canceling Procedures and Other DMCS Controlled Documents."

MCP-204, "Administrative Record and Information Repository Procedure for Environmental Restoration."

MCP-3573, "Vendor Data."

MCP-557, "Managing Records."

PLN-598, "Records Management Plan for the OU 7-10 Glovebox Excavator Method Project."

